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Declass Review, NIMA/DoD

5 October 1962

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Enclosed you will find three copies of the 22nd Monthly Progress Report on Contract [REDACTED] Task Order No. 1, for the development of an Image Enhancement Instrument.

Very truly yours,



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Enclosures - 3

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22nd MONTHLY PROGRESS REPORT
Image Enhancement Program
Contract [REDACTED] Task Order No. 1
4 September to 4 October, 1962

Following the diagnosis that the scanning difficulties were principally caused by non-uniform mirror motion, a new drive system was designed utilizing a "box" cam, operating the mirror at 5 sweeps per second.

During the period covered by this report, the cam was procured, after considerable delay, and the assembly of the scanner completed. Initial tests showed that the mirror motion is much more uniform. The output photographs now reveal the fluctuations in the modulated light source, and work is underway to design and incorporate the light regulating feedback loop in order to reduce the effects of these fluctuations.

A number of aperture stops have been added to the optical system in order to reduce flare light.

The rapid film processor has been re-built with some new parts.

The modulated light source cathode ray tube deflection yoke subassembly has been replaced with components of better design.

The camera lens, which was initially an f/2 Astro-Berlin projection lens, has been replaced by an f/3.5 Kodak Ektar. The Astro-Berlin was found to seriously limit the resolution capability of the output recording.

Three of the plane mirrors in the input scanner optical path have been replaced with new mirrors and improved mirror mounts.

Emphasis on the project is now confined to the laboratory experimental evaluation of the central "core" enhancement process. The sole task objective is the production of photographic results which adequately demonstrate the capabilities of the techniques incorporated. The orientation of the remaining effort on the project will follow the examination, by concerned Government engineers, of these results.

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